3194

Diag. Cht. No. 8502-1 & 9302

Department of Commerce and Labor
COAST AND GEODETIC SURVEY

Superintendent.

State: Alaska

DESCRIPTIVE REPORT.

Sheet No.

LOCALITY:

Bering Sea - Coast of Alaska

190

CHIEF OF PARTY:

H. C. Dibrell.

B

3194

DEPARTMENT OF COMMERCE AND LABOR

Coast and Geodetic Survey

O. H. Tittmann, Sup't.

Hydrographic Sheet No ..3194......

(~~Field~~ Chart #3802)

B E R I N G S E A

ALASKA

Steamer EXPLORER

Walter C. Dibrell, Assistant, Chief of Party

Begun .... May 19,1910

Completed Sept.23,1910

Hydrography in charge of Walter C. Dibrell, Assistant.

S T A T I S T I C S

Date	Vol.	Let.	Miles (Stat.)	Sdgs.	Angles	Remarks
June 4	13		----	----	----	Str."Explorer
" 5	13		138.0	15	----	" "
Sept.17	13	BB	13.0	83	30	" "
" 17	13	"	105.0	155	51	" "
" 23	13		370.0	47	——	" "
6	1	1	626.0	300	81	

Inked & verified by [illegible]

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SHEET NO. 3194 (CHART # 8802), BERING SEA, COAST OF ALASKA.

In accordance with instructions of the Superintendent, soundings were taken while navigating the Bering Sea enroute to and from the season's working ground in Bristol Bay. There are three routes along which soundings were taken: Port Moller to Nushagak Bay, Nushagak Bay to Cape Newenham, Cape Newenham to Unalaska. All lines depend partly or entirely upon dead reckoning, adjusted between fixed positions. Soundings were not taken from Unalaska to Port Moller on account of thick weather and interference by ice.

2. The notes relating to the soundings have been entered in an ordinary sounding record, and the lines have been plotted as far as practicable on chart # 8802.

3. In passing Cape Seniavin enroute to Port Moller from the north it was noted that there are two turns in the shore line in that vicinity each marked by bluff shore, the northern one agreeing approximately in position with that of Cape Seniavin as charted. Full notes were therefore logged in regard to this part of the coast, and from these notes a revission of the shore line northward of Entrance Point has been sketched in on the chart. That Cape Seniavin as charted projects too far seaward relative to the adjacent shore, is clearly indicated by bow and beam bearings taken to the cape and to other features on each side.

4. In making the revission, the distance of Cape Seniavin from Entrance Point is assumed to be correct, as it agrees closely with distance by patent log on the run northward. The distance

between the two points is giving by two measurements with patent log, one each way, and the bearing of the two points when in range was twice noted. The bearing of the southern one from Entrance Point is furnished by a theodolite direction taken from Entrance ⊙ tangent to land-marked in the record, "Cape Seniavin (?)". (See records Port Moller work 1910 - Spit ⊙ to tangent = 200° - 39'). The records of Port Moller hydrography 1910 (vol. 2 A day) also furnish some sextant angles of value in revising this shore line. In the sounding record " First Point" is the first point below Cape Seniavin, although its distance therefrom may not be correctly stated in this record.

5. The revised shore line is believed to be a marked improvement over the chart, but the plotting should be verified, consulting all available data. It might be worth while to plot the work on a larger scale.

6. The house referred to in the notes marks a small village, which a native of Port Moller said was called Bear Creek. The same house is referred to throughout the record.

7. The point of departure for the run from Port Moller to Mushagak is taken as the end of the sounding line of " A " day, Port Moller records, the positions being plotted on the chart by bearing and distance from Entrance Point. It is noted that the dead reckoning is fairly consistent with the revised shore line about Cape Seniavin, although showing marked disagreement with the chart. The discrepancy of 1.5 miles in distance off the Cape may be due to current, as it is known that a marked

off shore set was experienced at the entrance to Port Moller.

8. Few soundings were recorded along this part of the ~~co~~ coast, as the track lay near to shore and it is not considered good practice to chart soundings close to the land without obtaining accurate data upon which to base their positions relative thereto. With the exception of the shoal area off Entrance Point, this part of the coast seems to be clear, and the depths given on the chart seems to be about right for the corresponding distance from shore.

9. Cape Seniavin is of moderate elevation (estimated at 200 feet) and seaward face shows as a short eroded dark bluff. From highest part of bluff ground drops on south side, and on north side is a ridge of about same elevation about one mile long near the shore but not eroded. This part of the coast is low tundra country for some miles inland, but toward Port Moller the mountains draw nearer to shore.

10. The hillocks shown on the chart about eleven miles northward of Cape Seniavin are distinctive land marks, but they appear to cover a breadth of three or four miles, and no one appears to possess features that would readily differentiate it from the others. The highest appear to be about 200 feet.

11. The point to southward of Cape Seniavin shows as an eroded dark bluff about 2 or 3 miles long with two small detached knolls to northward of end of bluff. Highest part of bluff is about 150 feet high and shore line both north and south of bluff is low. About 6 miles (estimated) from Entrance Point is a low black bluff about 1/4 mile long.

12. Soundings were taken and recorded between Cape Seniavin and the entrance of Nushagak Bay. Between the Cape and the Ugagik

River they are eleven miles apart; from there on they were taken at irregular intervals. A new departure was taken off the Cape and the dead reckoning plotted up to the Ugaguk River, were a fix was obtained by crossing a sumner line on the sun with a bearing to a bluff at the mouth of the river. The discrepancy with D. R. was distributed throughout the line, and the soundings have been plotted on the chart in their adjusted positions. The charted position of Cape Seniavin was used and if the revised position is adopted the line will require new adjustment.

13. No irregularities or evidence of detached shoals are indicated by the soundings, but in general they show a few fathoms less than the chart. This discrepancy would be less if the line were swung inshore to conform to the new position of Cape Seniavin, but it does not appear that it would even then be entirely removed. A 13 - fathom sounding shown on the chart about midway between the Cape and Ugaguk River is believed to be in error. Twenty-six fathoms was found near that position.

14. The line between Ugaguk River and Nushagak Bay I have adjusted between the fixed position off the river, and the final position depending upon bearings taken to objects determined by the survey of Nushagak Bay. The latter position was plotted upon boat sheet " C ", and transferred to the chart by geographical coordinates. The adjustment is somewhat arbitrary but the adjusted line is believed to be about right. It is indicated on the chart by a dotted ink line. It is consistent with a sumner line observed at the end of the magnetic swing; and, if the adjusted line is correct, a flood current of 2.3 knots is indicated in Kvichak

Bay, which is considered a reasonable strength of current. It appeared to be about low water when the ship was off the flats of the Ugaguk River at 5 a.m. and the vessels at Clark Point, Nushagak Bay, swung to the ebb at about noon.

15. None of the soundings above the Ugaguk River have been plotted by the field party. These are believed to have value as reconnaissance, but the positions are considered too weak to justify putting them on the chart. The same remark applies to the soundings taken near the shore below the river. No notes in regard to the features of the coast between Cape Seniavin and Nushagak Bay can be furnished.

16. Enroute from Nushagak to Kuskokwim, frequent soundings were taken between Cape Constantine and Cape Newenham. The line begins off the former cape, and hydrographic signals were used for positions as far as they could be seen. The line has been plotted as far as practicable on hydrographic sheet " D " and the last position transferred by geographical coördinates to the chart as a point of departure. The remainder of the line has been plotted by dead reckoning, but it is unadjusted for the reason that intermediate fixes were obtained dependent upon Round Island and an accurate position for that island is not at hand. A good determination should be furnished by the records of the last two seasons.

17. A number of angles and ranges are noted in the record and these will have some value in checking up the chart.

18. Round Island is high mountain of no great extent rising boldly from the sea. It is a rocky ridge lying about

north-west and south-east. As seen from the north-east it shows no definite summit, but the highest part is nearer to the northern end. From the south-east it appears narrow with a definite summit. On a W.N.W. bearing its left hand slope is convex and the right hand slope concave. The island when not obscured by clouds, is a prominent and useful landmark on account of its height and its seaward position relative to other land.

19. Between Round Island and Hagemeister Island two lower island and two rocks (the "Twins") were observed, the higher to the westward. The former, or High Island, presents no definite summits or noticeable features as seen from the southward. Crooked Island when open to eastward of High Island shows two fairly definite summits, ~~is not shown on the chart~~

20. With Crooked Island bearing about north magnetic, there appeared to be a third island showing just clear of it to the eastward. This is low, dark, and apparently rocky. It was thought at first to be a part of Crooked Island but it was observed to pass in front of High and Crooked Islands in turns, and, when clear of the latter, no connection could be seen from the rigging. (See right and left tangents, positions 37 and 39.)

21. The "Twins" appear to be inappropriately named. There is a high prominent rock in that locality. It is small in horizontal section, has steep sides, and appears to be about 150 feet high. Near to it is a low pyramidal rock with a sharp apex. It is quite small and low compared with the other.

22. Hagemeister Island is high and shows to a considerable distance. Its southern end, is a prominent headland, which, seen

on a westerly bearing, rounds steeply, but not abruptly, into the sea. The bearings and angles to Hagemeister Island noted in the record appeared to be taken to the southern end of the island.

23. Cape Newenham is a high and bold rocky headland, a prominent land mark. The highest summits of the Cape were seen about 50 or 55 miles (nautical). These summits (two in number) are about three or four miles to eastward of the end of the cape, that part of the ridge lying to westward of them being of nearly uniform height and much lower, though still high land. The mountains in this locality are thickly studded with sharp rock pinnacles. Some 6 or 7 miles east of the cape is a low valley through which there is a portage. There appears to be good water on the south side of the peninsula close up to the land.

24. Cape Peirce is much lower than Cape Newenham, although it is bold at the end. Approaching from eastward the latter is made some time before the former. From both east and west Cape Peirce resembles an island.

25. A current of some strength (1.4 knots, measured), probably tidal, was observed to set to westward along the coast between Cape Peirce and Cape Newenham. Strong tide rips were observed to westward, south-westward and north-westward of Cape Newenham.

26. On the run from Cape Newenham to Unalaska soundings were taken once every hour. The line has been adjusted between initial and final positions and the soundings have been plotted.

The set of 12 miles to northward encountered on this line is what would reasonably be expected, as the wind was south-east and south-west, moderate to fresh, and the ship was ~~high~~ light. Some ~~deviation~~ divergence was made from a direct course in order to get soundings where most needed. No great deviations from the soundings given on the chart are noted, although there are differences of a few fathoms in some cases.

27. The chart used for the plotting is in poor condition but it is the only one of that number on hand.

Respectfully submitted,

Ulric O'Connell

Assistant, C. & G. Survey,

Chief of Party.

Unalaska, Alaska.

September 30, 1910.

VEC
Aug.18,1914.

HYDROGRAPHIC SHEET 3194.

Cape Newenham to Cape Sarichef, Bering Sea, Alaska,

by Asst. J. B. Miller in 1914.

TIDES.

Predicted tides were used for reduction of soundings.

		ft.
Mean Lower Low Water or plane of reference below mean sea level	=	4.0
Mean rise and fall of tides	=	5.0